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Upgrade to LED Fluorescent Tubes

The humble fluorescent tube has been the mainstay of commercial lighting for many years. The technology provided an energy efficient, lineal light source that did not require a lot in the way of maintenance that were perfect for use in commercial applications, buildings, offices and carparks. Fluorescents did however have their downsides. The ballasts and ignitors had a limited life and the tubes were made from fragile glass and contained mercury vapour, making clean-up of a broken tube a hazardous job.

LED replacement fluorescent tubes have been around now for over 5 years, while the original models expensive, unreliable and produced significantly less light than a traditional fluorescent, compounded by the fact that a traditional fluorescent emits light 360 degrees and often uses a reflector to avoid wasting light from the back, while the LEDs were limited in their beam spread. Now however, as the LED technology has improved and output per watt is more than 3 times that of the original versions, LED fluorescent tubes are a viable alternative. There are two main options of LED replacement fluorescent tubes available today. Ballast compatible and stand-alone, each has its own advantages and disadvantages.

Ballast compatible. These are the easiest to install and will operate with the existing fitting and ballast setup. Installation involves removing the existing fluorescent and starter assembly, and replacing with the LED tube and supplied "starter". While there is a significant saving on installation time, the potential failure points are the tube holder and the ballast. Both of these components have a limited life span, and while they may not cause the new LED tube to fail, they may fail themselves with the same result.

Stand-alone: these tubes have either an internal or external driver to reduce the mains voltage and is the most reliable option to install if the age of the light fixtures is over 5-10 years. Installation is time consuming though and should be performed by a licensed electrician and it involves removing the existing ballast and ignitor from the fixture and re-wiring for the LED power supply. There is also potential here with lower quality internal driver tubes to become live if the driver fails or is not wired correctly.

LED tubes are now a viable replacement for traditional fluorescents, offering energy savings of 50 - 60% without sacrifcing light output and a life expectancy of 7 - 10 times that of a traditional tube, resulting in significant maintenance savings. However like anything, tubes should be purchased from a reputable manufacturer and their application should be checked first to ensure they are fit for their intended purpose. Specialized Lighting Concepts carries a full range of LED Lights & LED Fluorescent Tubes

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